



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200
Fax 613 632-5246

D5609-1
Job Sheet 192486



Part No: D5609-1

Job Qty: 1 pcs

Part Name: EC130 Fwd Crosstube



Part Weight: 0 lbs

fty: Medium

Job Created: 3/26/19

J

Due Date: 4/29/19

Type: Stock

Note: TBD D5609 REV.A IPP REV:A 18.06

Ship Via:

Scap

Bill

Op No	Operation	Qty	Start Date	Due Date	Hrs	hrs	Sign-off
100	Handfinish - 1 - Chemical	1 pcs	4/29/19		0.00	0.17	Handfinish - 1 - 1 Handfinish - 1 - 2 Handfinish - 1 - 3 Handfinish - 1 - 4 Handfinish - 1 - 5 Handfinish - 1 - 6 Handfinish - 1 - 7 Handfinish - 1 - 8 Handfinish - 1 - 9 Handfinish - 1 - 10 Handfinish - 1 - 11 Handfinish - 1 - 12 Handfinish - 1 - 13 Handfinish - 1 - 14 Handfinish - 1 - 15 Handfinish - 1 - 16 Handfinish - 1 - 17 Handfinish - 1 - 18 Handfinish - 1 - 19 Handfinish - 1 - 20 Handfinish - 1 - 21 Handfinish - 1 - 22
							<i>DEC 19-03-28</i>
105	QC 5	1 pcs	4/29/19		0.00	0.00	QC 5 - 10 QC 5 - 12 QC 5 - 17 QC 5 - 18 QC 5 - 19 QC 5 - 22 QC 5 - 24 QC 5 - 3 QC 5 - 43



Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
CANADA
TEL: 1 613 632-5200
Email: sales@dartaero.com
www.dartaerospace.com

Container No: S167547



Part: D5609-1

Job No: 192486

Serial No/Batch: S167547

#100

Revision: A

Inspector:

Exp Date:

Instructions:

Date: 06/18/19

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				QC 5 - 49	
				QC 5 - 51	
				QC 5 - 58	
				QC 5 - 68	
				QC 5 - 9	19-03-31
				QC 5 - 50	
				QC 5 - 30	
				QC 5 - 40	
110	Outsource - 23 - Tube Bending 1 pcs	4/29/19		PAR005-VU	
120	Packaging 2-1 - Receive - B4B 1 pcs	4/29/19	0.00 0.00	Packaging 2 - 1 - B4B	
				Packaging 2 - 2 - B4B	
				Packaging 2 - 3 - B4B	
				Packaging 2 - 5 - B4B	
				Packaging 2 - 4 - B4B	
				Packaging 2 - 6 - B4B	
				Packaging 2 - 7 - B4B	
				Packaging 2 - 8 - B4B	
				Packaging 2 - 9 - B4B	
				Packaging 2 - 10 - B4B	
				Packaging 2 - 11 - B4B	
				Packaging 2 - 12 - B4B	
				Packaging 2 - 13 - B4B	
				Packaging 2 - 14 - B4B	
				Packaging 2 - 15 - B4B	
				Packaging 2 - 16 - B4B	
				Packaging 2 - 17 - B4B	
				Packaging 2 - 18 - B4B	
				Packaging 2 - 19 - B4B	
				Packaging 2 - 20 - B4B	
				Packaging 2 - 21 - B4B	
				Packaging 2 - 22 - B4B	
				Packaging 2 - 23 - B4B	
				Packaging 2 - 24 - B4B	
				Packaging 2 - 25 - B4B	
				Packaging 2 - 26 - B4B	
				Packaging 2 - 27 - B4B	
				Packaging 2 - 28 - B4B	
				Packaging 2 - 29 - B4B	
				Packaging 2 - 30 - B4B	
				Packaging 2 - 31 - B4B	
				Packaging 2 - 32 - B4B	
				Packaging 2 - 33 - B4B	
				Packaging 2 - 34 - B4B	
				Packaging 2 - 35 - B4B	
				Packaging 2 - 36 - B4B	
130	QC 6 1 pcs	4/29/19	0.00 0.00	QC 6 - 9	
				QC 6 - 68	
				QC 6 - 61	
140	Packaging 3-1 - Stock - B4B 1 pcs	4/29/19	0.00 0.00	Packaging 3 - 1 - B4B	
				Packaging 3 - 2 - B4B	
				Packaging 3 - 3 - B4B	
				Packaging 3 - 4 - B4B	
				Packaging 3 - 5 - B4B	
				Packaging 3 - 6 - B4B	
				Packaging 3 - 7 - B4B	
				Packaging 3 - 8 - B4B	
				Packaging 3 - 9 - B4B	
				Packaging 3 - 10 - B4B	
				Packaging 3 - 11 - B4B	

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					Packaging 3 - 12 - B4B	
					Packaging 3 - 13 - B4B	
					Packaging 3 - 14 - B4B	
					Packaging 3 - 15 - B4B	
					Packaging 3 - 16 - B4B	
					Packaging 3 - 17 - B4B	
					Packaging 3 - 18 - B4B	
					Packaging 3 - 19 - B4B	
					Packaging 3 - 20 - B4B	
					Packaging 3 - 21 - B4B	
					Packaging 3 - 22 - B4B	
					Packaging 3 - 23 - B4B	
					Packaging 3 - 24 - B4B	
					Packaging 3 - 25 - B4B	
					Packaging 3 - 26 - B4B	
					Packaging 3 - 27 - B4B	
					Packaging 3 - 28 - B4B	
					Packaging 3 - 29 - B4B	
					Packaging 3 - 30 - B4B	
					Packaging 3 - 31 - B4B	
					Packaging 3 - 32 - B4B	
					Packaging 3 - 33 - B4B	
					Packaging 3 - 34 - B4B	
					Packaging 3 - 35 - B4B	
					Packaging 3 - 36 - B4B	
150 QC 21 - FG	1 pcs	4/29/19	0.00 0.00		QC 21 - FG - 21	
					QC 21 - FG - 70	
					QC 21 - SA - 53	

Part Op 100 - (Chemical Conversion Coat per QSI005 4.1), Alodine prior to sending the extrusion to an outside vendor.
Descriptions: 105 - ***IDENTIFY SERIAL # BY USING A MARKER IN THE MIDDLE OF TUBE AT CONTAINER CREATION***
INSPECT ALODINE AND MAKE SURE TUBE IS IDENTIFY WITH MARKER IN THE MIDDLE OF THE TUBE
110 - Issue P/O: 43043 Manufacture D5609-1 as per dwg (Bend, Remove excess material after bending)
Ship extrusion D6029-120 ***INSPECTION REPORT REQUIRED FOR EACH TUBE. MUST BE TRACEABLE TO INDIVIDUAL SERIAL NUMBER*** **AS PER DWG NOTE 9, EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS.*** Material release note is required
120 - (Receive & Inspect for Damage & Mat'l Certs), Ensure material release note is attached *****CHECK ID OF CUFF USING DT10434 GO PLUG GAUGE AS PER NOTE 11*****
130 - (QC6- All purchased or subcontracted products), *****CHECK ID OF CUFF USING DT10434 GO PLUG GAUGE AS PER NOTE 11*****
140 - (Identify as per dwg & Stock Location: _____)
150 - (QC21- Final Inspection - Work Order Release)

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6029-120	Tube, Seamless	1 pcs (1 ea)	100-Handfinish - 1 - Chemical	

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Handfinish - 1 - Chemical	D6029-120	1	22	0

Part Specifications

Specifications could not be found.

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Dart Aerospace Ltd.
1270 Aberdeen St
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Tel (613) 632-5200

PURCHASE ORDER**PO043043**

Supplier: PAR005-VU Parker Fabrication Inc 501 East Courtland Morton, IL 61550-9043 USA Phone: 309-266-8413 Fax: 309-266-7231	PO No: PO043043 PO Date: 4/1/19 Due Date: 5/16/19 Purchase Order Revision: Revision Date: Ship-To Contact: Phone: <i>Revision</i>
Ship To: 1270 Aberdeen Street Hawkesbury ON K6A 1K7 Canada Phone: 613-632-5200	Via: Journey Freight Pymt Terms: Net 30 Freight Terms: Prepaid Special Comments: Ensure that parts are serialized in such a way as to easily match tube to its corresponding paper work.

Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	192508	D5609-1	EC130 Fwd Crosstube Issue P/O: Manufacture D5609-1 as per dwg (Bend, Remove excess material after bending) **Ship extrusion D6029-120** ***INSPECTION REPORT REQUIRED FOR EACH TUBE. MUST BE TRACEABLE TO INDIVIDUAL SERIAL NUMBER*** ***AS PER DWG NOTE 9, EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS.*** Material release note is required	Firmed	-	5/16/19	1 pcs	0 pcs	1 pcs	\$269.42/pcs	\$269.42

1x JUN 18 2019



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Hawkesbury, ON
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PURCHASE ORDER
PO043043



Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
Line Item Note FWD X-TUBE 13 each at your location. Ensure that parts are serialized in such a way as to easily match tube to its corresponding paper work.											
	192507	1X	JUN 18 2019	Firmed		5/16/19	1 pcs	0 pcs	1 pcs	\$269.42/pcs	\$269.42
	192506	1X	JUN 18 2019	Firmed		5/16/19	1 pcs	0 pcs	1 pcs	\$269.42/pcs	\$269.42
	192505	1X	JUN 18 2019	Firmed		5/16/19	1 pcs	0 pcs	1 pcs	\$269.42/pcs	\$269.42
	192504	1X	JUN 18 2019	Firmed		5/16/19	1 pcs	0 pcs	1 pcs	\$269.42/pcs	\$269.42
	192502	1X	JUN 18 2019	Firmed		5/16/19	1 pcs	0 pcs	1 pcs	\$269.42/pcs	\$269.42
	192499	1X	JUN 18 2019	Firmed		5/16/19	1 pcs	0 pcs	1 pcs	\$269.42/pcs	\$269.42
	192492	1X	JUN 18 2019	Firmed		5/16/19	1 pcs	0 pcs	1 pcs	\$269.42/pcs	\$269.42
	192491	1X	JUN 18 2019	Firmed		5/16/19	1 pcs	0 pcs	1 pcs	\$269.42/pcs	\$269.42
	192490	1X	JUN 18 2019	Firmed		5/16/19	1 pcs	0 pcs	1 pcs	\$269.42/pcs	\$269.42
	192489	1X	JUN 18 2019	Firmed		5/16/19	1 pcs	0 pcs	1 pcs	\$269.42/pcs	\$269.42
	192488	1X	JUN 18 2019	Firmed		5/16/19	1 pcs	0 pcs	1 pcs	\$269.42/pcs	\$269.42
	192486	1X	JUN 18 2019	Firmed		5/16/19	1 pcs	0 pcs	1 pcs	\$269.42/pcs	\$269.42
Sub Total:							13	0	13		\$3,502.46



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PURCHASE ORDER

PO043043



Items

Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
2	192510	D5611-1	EC130 Skidtube Issue P/O: Manufacture D5611-1 as per dwg (Bend,Swag, Remove excess material after bending) **Ship extrusion D6031-120** ***INSPECTION REPORT REQUIRED FOR EACH TUBE. MUST BE TRACEABLE TO INDIVIDUAL SERIAL NUMBER**** ***AS PER DWG NOTE 8, EXTREME CARE MUST BE TAKEN TO PROTECT THE OUTSIDE SURFACE OF THE TUBE. THE OUTSIDE SURFACE MUST BE SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, OR DENTS.*** Material release note is required	Firmed	-	5/16/19	1 pcs	0 pcs	1 pcs	\$306.69/pcs	\$306.69
Line Item Note SKID TUBE 7 each at your location, 7 in this shipment. Ensure that parts are serialized in such a way as to easily match tube to its corresponding paper work.											
	192525	1 X	JUN 1 8 2019	Firmed	-	5/16/19	1 pcs	0 pcs	1 pcs	\$306.69/pcs	\$306.69
	192526	1 X	JUN 1 8 2019	Firmed	-	5/16/19	1 pcs	0 pcs	1 pcs	\$306.69/pcs	\$306.69
	192527	1 X	JUN 1 8 2019	Firmed	-	5/16/19	1 pcs	0 pcs	1 pcs	\$306.69/pcs	\$306.69
	192528	1 X	JUN 1 8 2019	Firmed	-	5/16/19	1 pcs	0 pcs	1 pcs	\$306.69/pcs	\$306.69
	192529	1 X	JUN 1 8 2019	Firmed	-	5/16/19	1 pcs	0 pcs	1 pcs	\$306.69/pcs	\$306.69
	192530	1 X	JUN 1 8 2019	Firmed	-	5/16/19	1 pcs	0 pcs	1 pcs	\$306.69/pcs	\$306.69
	192535	1 X	JUN 1 8 2019	Firmed	-	5/16/19	1 pcs	0 pcs	1 pcs	\$306.69/pcs	\$306.69
	192536	1 X	JUN 1 8 2019	Firmed	-	5/16/19	1 pcs	0 pcs	1 pcs	\$306.69/pcs	\$306.69
	192531	1 X	JUN 1 8 2019	Firmed	-	5/16/19	1 pcs	0 pcs	1 pcs	\$306.69/pcs	\$306.69
	192532	1 X	JUN 1 8 2019	Firmed	-	5/16/19	1 pcs	0 pcs	1 pcs	\$306.69/pcs	\$306.69
	192533	1 X	JUN 1 8 2019	Firmed	-	5/16/19	1 pcs	0 pcs	1 pcs	\$306.69/pcs	\$306.69
	192534	1 X	JUN 1 8 2019	Firmed	-	5/16/19	1 pcs	0 pcs	1 pcs	\$306.69/pcs	\$306.69

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Tel (613) 632-5200

PURCHASE ORDER
PO043043



Items											
Line Item	Job	Part	Description	Status	Account	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
	192537		JUN 18 2019	Final		5/16/19	1 pcs	0 pcs	1 pcs	\$306.69/pcs	\$306.69
Sub Total:							14	0	14		\$4,293.66
Grand Total:										\$7,796.12	

Order Notes

Procurement Quality Clauses
A005 right of entry
A012 chemical and physical test report
A016 personnel qualification
A017 raw material identification (as applicable)

A022 Apical Processing
A024 process certifications
A026 certification of material conformance

A041 quality management system
A042 dart notification by supplier
A043 retention of quality documents

A048 counterfeit parts avoidance, detection, mitigation and disposition program

A049 supplier awareness

Terms & Condition of Purchasing(Suppliers) and Procurement Quality Clauses are an integral part of our AS9100 requirements. To learn in detail, please visit www.dartaerospace.com for further explanation.

Handwritten signature and date 6/3/19

Plex 6/3/19 12:27 PM dart.Lussier.Patrick



Parker Fabrication, Inc.
501 East Courtland
Morton, IL 61550-9043

Ph: 309.266.8413
Fax: 309.266.7231

1 of 3
Pack List

Number: 123373

Date: 10-Jun-19

To

Dart Aerospace
1270 Aberdeen St
Hawkesbury, ON K6A 1K7
Canada

Ship To

Steven Hemmerich
Dart Aerospace
1270 Aberdeen St
Hawkesbury, ON K6A 1K7
Canada

Ph: 1 613 632-5200

Ph: 1 613 632-5200

Terms		Ship Via	
Net 30		Freight Collect	
Quantity	Description		
✓ 13 ea	Part: D5609-1 ✓ EC130 Fwd Crosstube	Rev: A	
	SO: 70913	PO: PO043043 ✓	Line: 001
14 ea	Part: D5611-1 EC130 Skidtube	Rev: A	
	SO: 70913	PO: PO043043	Line: 002
Thank you for your business!			
RECEIVED JUN 14 2019 DART AEROSPACE LTD.			



Certificate of Conformance (CoC)

Form F-4003
Page 1 of 1
Last Revised:
3/09/2018

Supplier Name: Parker Fabrication
Supplier Number: _____
Part Description: FWD X-TUBE (EC130)

Part Number: D5609 ✓
Drawing Number: D5609 Revision: A

Purchase Order #: PO043043 ✓
Quantity: 13 ✓
Serial Number(s): _____ (if applicable)
Lot/Heat Number: _____ (if applicable)

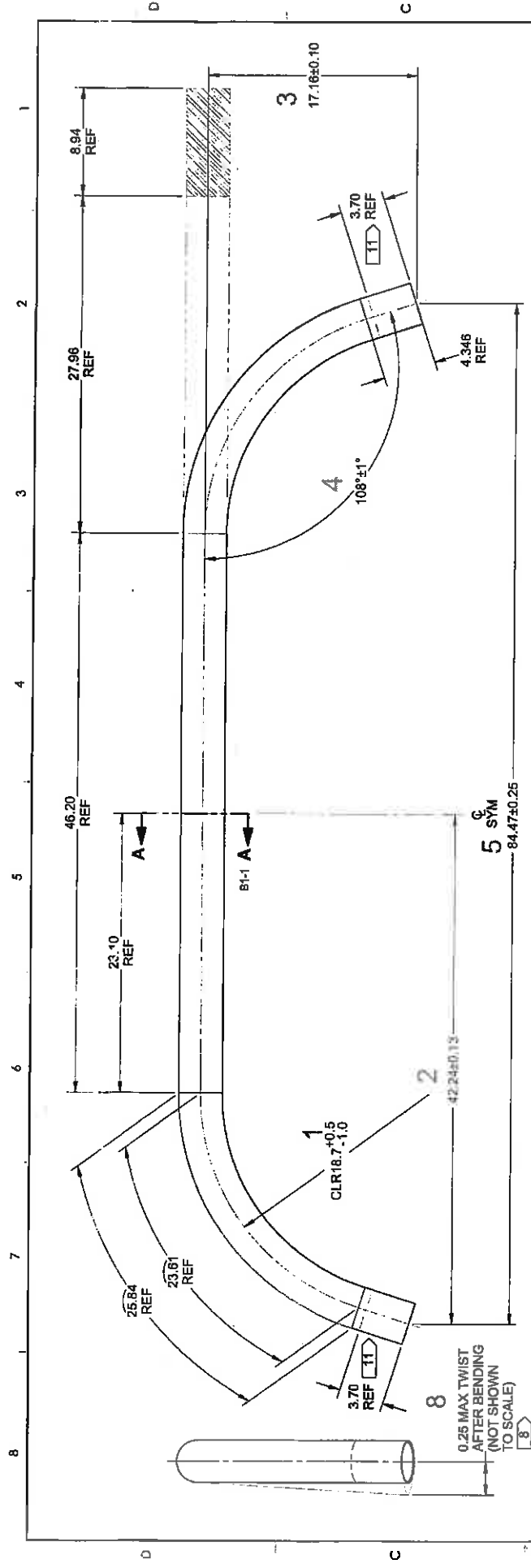
All technical requirements of the contract are satisfied. Quality and performance are in accordance with the contract, the specifications, and all references and associated contractual drawings and documents.

I, as a supplier to Dart Aerospace, acknowledge and certify the material covered under this document is produced in accordance with the following:

- ☒ All Contractual "Flow Down" Requirements
 - ☒ Supplier Standards Guide
 - ☒ Global Supplier Quality Manual
 - ☒ Product Conformance
 - ☒ Free of Counterfeit Material
- (Acknowledge by marking the boxes)

 Quality Manager 5/31/2019
Signature Title Completion Date

This certifies the parts/items/materials identified above conform to all applicable drawings and/or specifications as evidenced by reports or other documentation on file and all other purchase order and quality requirements have been met.



D5609-1 FWD X-TUBE (EC130)

CONTROLLED COPY

RELEASED

2018 OCT 02
ECN 18-017

SECTION A-A D5-1
SCALE 2X

- NOTES:
- 1) MATERIAL: MAKE FROM D5609-120
 - 2) FINISH: CHEMICAL CONVERSION COAT EXTRUSION PER DART QSI 005 4.1 PRIOR TO BENDING / TRIMMING
 - 3) TOLERANCES: PER DART QSI 014 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.006 TO 0.010 MAX
 - 6) IDENTIFICATION: PER DART QSI 044 6.1
 - 7) WEIGHT: 17.30lb
 - 8) MAX TWIST: WITH XTUBE LAYED FLAT ON SURFACE, THE DIFFERENCE BETWEEN CUFF HEIGHTS FROM THE SURFACE SHALL BE NO LARGER THAN 0.25
 - 9) SMOOTH AND FREE FROM SURFACE DEFECTS SUCH AS SCRATCHES, NICKS, WRINKLES, OR DENTS. DEFECTS UP TO 0.005" MAY BE BLENDED OUT LONGITUDINALLY. CIRCUMFERENTIAL GRIND MARKS ARE UNACCEPTABLE.
 - 10) MAXIMUM TUBE FLATTENING DUE TO BENDING IS 2% BASED ON OD.
 - 11) CHECK MIN ID USING TOOL DT10434 FOR 3.70 LENGTH.

REV.	NEW ISSUE	DESCRIPTION	NO	ZF	BY	DATE
A						18.05.04
DESIGN						
DRAWN						
CHECKED						
MFG. APPR						
APPROVED						
DE APPR						
DATE	18.05.04					

APPROVED

DESCRIPTION	DART AEROSPACE LTD
DRAWING NO.	D5609
MFG. APPR	
APPROVED	
DE APPR	
DATE	18.05.04
NO	
ZF	
BY	
DATE	18.05.04

DART AEROSPACE LTD
HAWKESBURY, ONTARIO, CANADA

REV. A
SHEET 1 OF 1
SCALE
NTS

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DATE 10/02/2018 BY 10434

Production Part Approval Dimensional Test Results

[illegible]

Production Part Approval Dimensional Test Results

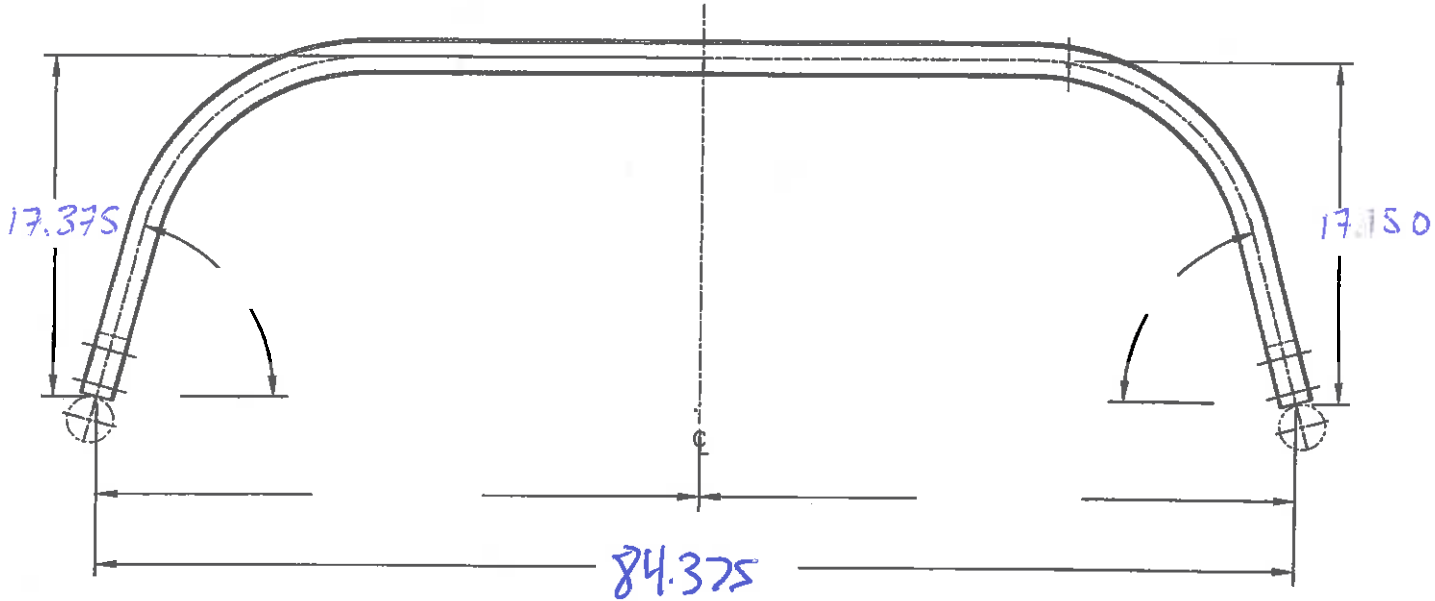
[illegible]

Production Part Approval Dimensional Test Results

[illegible]

DART AEROSPACE LTD		Work Order: 192486
Description:		Part Number:
Inspection Dwg:	Rev:	Page 1 of 1

Required Dimension	Min	Max
Height		
1/2 Span		
Angle		
Total Span		
Bending Passes		
Crushing		



	Side A	Side B
Bending Passes		
Crushing		
Comments		

QC15 Inspection	
Date	

Rev	Date	Change	Revised by	Approved
A		New Issue		
B	06.09.19	Reformat; QC level revised	KJ/JM	
C	07.02.06	Reformat	KJ/JM	
D	12.02.15	Added bending passes and crushing	KJ	
E	12.03.07	Revised comments table	KJ	

Entered: _____ Date: _____

WORK ORDER NON-CONFORMANCE / ROUTE UPDATE

Route update only



Job: _____ Part No. _____		DISPOSITION Rework ☐ Scrap ☒ Use-as-is ☐		DEPARTMENT/PROCESS Skid-tube Machining ☐ Large Fab ☐ Cross tube Small Fab ☒ Finishing ☐ Eng. (Non-AW) ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Engineering Water Jet ☐ Supplier ☐ Quality ☐			
Date: 19-08-27	Sequence #: 130	QTY Affected: 1		Disposition			
Description Work Order Deviation One side measured at 17.345 avg 17.16 ± 0.1		Disposition Not repairable/reworkable in current condition				MRB (Q51042) W.D. 19.08.13 Completed By N.O. 19.08.13 Lead hand / Supervisor NW 19-08-27 QC / QA Coordinator 68 0.89 AUG 27 2019	
Root Cause Operator ☐ Manufacturing Process ☒ Equip/Tooling ☐ Handling/Preservation ☐ Material ☐ Product Improvement ☐ Process Improvement ☐ Human Factors ☐		FAULT CATEGORY Pressure/Forced ☐ Bending ☐ Crushing ☐ Cracks ☐ Crimp/Kink/Ripple/Wave/Twist ☐ Marks/Chatter ☐ Mislabeled ☐ Contamination ☐ Misaligned/off center ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Incomplete/Unclear Instructions ☐ Drill Holes ☐ Fit/Function ☐ Power Loss/Surge ☐ Folio/Program ☐ Grain Direction ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set/Set-up ☐ Positioned Wrong ☒ Outside Tolerance ☐ Drawing ☐ Finish ☐ Part Lost/Missing ☐ Misread ☐					
Other/Details:							